Debra A. Howland
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New Hampshire Public Utilities Commission
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Response to Staff Report on IR15-124, dated September 15, 2015

Dear Ms. Howland,

Thank you for the opportunity to provide a response to the PUC Staff Report on IR15-124. As a consumer and active member of a town energy commission, I appreciate the chance to weigh in on the momentous decisions being made regarding our economic and energy future.
My comments are my own opinion. I represent no organization, company, lobbying group, party or special interest. While I belong to many energy related volunteer organizations and may reference published materials from such organizations; I do so without their endorsement.

1.) My first concern with the PUC Staff report is the discussion surrounding use of the Request For Proposal (RFP) process as described on pages 46 and 47 for EDCs contracting capacity.

"As long as a significant number of the New England EDCs are affiliated with the sponsors of one of the competing pipeline projects, we believe it will be difficult if not impossible for EDCs to make a convincing case that pipeline open seasons qualify as fair, open and transparent competitive processes. For this reason, we believe it is imperative that the states develop and post for comment an alternative competitive solicitation process (i.e., Request for Proposals ("RFP")) much like the three southern New England states did when they developed a joint Clean Energy RFP."

An RFP process that results in 20 year firm contracts for capacity on one or more of the pipeline projects is unlikely to result in competitive pricing or consumer protections over the long run. The competitiveness is confined to a single point in time at the beginning of the 20 year contract.
As a consumer, it is incredibly distressing to know that companies like Liberty Utilities, which have a financial interest in pipeline construction and operation, are willing to allow electricity consumers to bear all the risk, while their shareholders will enjoy a steady revenue stream whether or not a single dekatherm is shipped to a power generator.

Moreover, the basis or evaluation criteria tied to the delivered price of gas is highly speculative by its very nature. Proposed pipeline buildouts to other States from the Marcellus Shale can, and likely will, create new upward pressure on gas prices. From page 47 of the report,

"Gas infrastructure projects, whether pipeline or LNG based, should be graded primarily on the basis of the delivered price of gas. This, however, raises the difficult question of how to determine in the context of an RFP the average price of gas at a specific receipt point over a 15- to 20-year contract term. While current market conditions may indicate some receipt points can access lower cost gas than others, those conditions are likely to change over time making such comparisons unreliable."
In summary, the RFP process is proposed not to protect ratepayers, but to give assurances to the EDCs that no one company will be given advantage over another.

2.) Who are the customers for this gas?
On page 41, the PUC Staff reports,

"In the event the states chose to go ahead with a region-wide solution and purchase pipeline capacity under long term contracts with EDCs, Unitil declined to directly answer the question of whether it would voluntarily agree to pay a portion of such capacity costs even if it were not required to contract for capacity. The most Unitil would say was that "it would seem feasible to allocate a share of net capacity costs from an EDC who does contract for pipeline capacity to an EDC that does not." In contrast, Liberty Utilities states that it "would be willing to pay its portion of any region-wide solution that may be implemented provided such costs would be fully recoverable from all of its customers during the period Liberty is obligated to pay for such costs." As an investor in the project, Liberty Utilities has nothing to lose here.

New England Power Generators Association, which represents 80% of the electricity suppliers/power generators in New England, opposes the plan to build pipelines at ratepayer expense as summarized in the report on page 39,

"NEPGA urges the Commission not to intervene in the competitive energy marketplace in support of out-of-market energy infrastructure initiatives that seek to subsidize interstate natural gas pipeline expansion projects and large-scale hydroelectric and wind energy purchases via the construction of high voltage transmission lines. NEPGA's principal argument in support of its recommendation is that New England's electricity and fuel supply markets are performing efficiently as evidenced by the significant investments being made in new power plants, the development of new pipelines, and the implementation of new and creative concepts to increase energy supplies, all without consumers bearing the risks associated with those investments. Undercutting those efforts through subsidized out-of-market initiatives could have significant unintended consequences for the power system and electricity consumers, according to NEPGA."

With an entire utility and 80% of the intended customers for these pipeline projects resisting the plan, how will electric ratepayers recover costs?

Also, in an October 5th presentation at the NH Energy Summit, Attorney Anthony Buxton, representing the Coalition to Lower Energy Costs (CLEC), described the situation as follows,

New England produces 52% of its electricity with natural gas, using 1 bcf/day
Pipeline Capacity into New England = 3.6 bcf/day *Note
Thermal load on an average day in Winter is 3.4 bcf/day + 1 bcf/day electricity generation
Thermal load on a very cold day in Winter is 4.5 bcf/day + 1 bcf/day electricity generation
So, our Winter gas demand is between 4.4 to 5.5 bcf/day

*Note I don't know if Attorney Buxton was including AIM and Atlantic Bridge in this number as the number I've seen for existing pipeline capacity is 3.4 bcf/day?

Attorney Buxton then asserted that the goal, after all the pipeline projects are built, is to commit 38 to 40% of that capacity to electricity generation.

If both the NED and Access Northeast pipelines are built, our capacity increases by 2.1 bcf/day (1.2 +.9) from 3.6 bcf/day to 5.7 bcf/day.

40% of 5.7 bcf/day is 2.28 bcf/day for electricity generation. Since New England produces over 50% of its electricity with 1 bcf/day of natural gas, the new pipeline capacity would bring New England to over 110% of its electricity production from natural gas. How is that possible…or desirable?

Moreover, 60% of 5.7 bcf/day is only 3.4 bcf/day. That is the amount currently available to LDCs during the winter when, as Attorney Buxton noted, they need 4.5 bcf/day on very cold days.

If the 500K Dekatherms that the LDCs have already contracted for on the NED reflect market growth, won't the peak winter demand be 5 bcf/day; leaving only .7 bcf/day for electricity generators?

If instead, Attorney Buxton meant that 38 to 40% of new capacity would be used for electricity generation (40% of 2.1 bcf/day or .84 bcf/day) that would drop generation of electricity from natural gas to 42% of total.

If electricity generation will only use .84 bcf/day or 15% of total pipeline capacity, why are electric ratepayers being asked to underwrite expansion of the natural gas market?

3) Cost to ratepayers

From page 5 of the PUC Staff Report,

"6) Based on these savings and cost estimates, Staff estimates the benefit to cost ratio for the Access Northeast project to be in the range of 1.3 to 2.0. Further, in order to allow such a cost-effective project to proceed, we estimate that the Commission would need to approve a distribution surcharge on all New Hampshire electricity consumers of about 4.8 mills per kWh. Revenues received from the release of the pipeline capacity to gas generators or to secondary market participants could result in a lower distribution surcharge. "

And from page 6 of the PUC Staff Report,

"11) Based on the above savings and cost estimates, we estimate the benefit to cost ratio for the NED project to be in the range 5.25 to 7.0 not including the value of enhanced electric grid reliability and the investment cost to provide enhanced transportation services. Further, in order to allow such a cost-effective project to proceed, we estimate that the Commission would have to approve a distribution surcharge on all New Hampshire electricity consumers of about 3.3 mills per kWh. Revenues received from the release of the

pipeline capacity to gas generators or to secondary market participants would further lower the distribution surcharge"

A little farther on into the Staff Report, on page 21,
"Based on a $600 million levelized annual cost for the project and assuming only Eversource and National Grid EDCs choosing to enter contracts with project sponsors, New Hampshire's Eversource affiliate Public Service Company of New Hampshire (PSNH) would be allocated 9% of the total capacity of the project at an annual cost of $54 million.[41] If this cost is recovered from all PSNH customers via a per kWh distribution surcharge, we estimate the surcharge would be about $0.0068 per kWh or 6.8 mills per kWh. To put this surcharge in context, this is 106% higher than New Hampshire System Benefit Charge (SBC). However, we consider 6.8 mills per kWh to be a worst case outcome assuming of course the $600 million annual cost estimate is reasonable. If all other EDCs in the region (including the region's consumer-owned municipal and cooperative utilities) agreed to shoulder their load ratio shares of project costs, then the size of the surcharge could be reduced. However, because the Eversource and National Grid affiliated EDCs account for approximately 71% of all retail sales by EDCs in New England, the surcharge would not fall below 4.8 mills per kWh."

On page 29 of the Staff Report,

"Based on a $400 million levelized annual cost for the electric portion of the NED project and the assumption that only Eversource and National Grid EDCs choose to enter contracts with TGP, New Hampshire's Eversource affiliate PSNH would be allocated 9% of the total capacity of the project at an annual cost of $36.0 million.[59] If this cost is recovered from all PSNH customers via a per kWh distribution surcharge, we estimate the surcharge would be about $0.0046 per kWh or 4.6 mills per kWh. For context, this is about 40% higher than the New Hampshire System Benefit Charge (SBC). If all other EDCs in the region (including the region's consumer-owned municipal and cooperative utilities) agreed to shoulder their load ratio shares of project costs, we calculate the size of the distribution surcharge could be reduced to about 3.3 mills per kWh."

Staff advocates for more pipelines on the basis that the more capacity we build, the lower prices will be. Again, this is highly speculative and, at this point, all we can assume are the costs. Based on the Staff Report,
Access Northeast charges will range from 4.8 to 6.8 mills per KWh
NED charges will range from 3.3 to 4.6 mills per KWh
If both projects are built, the combined cost will be 8.1 to 11.4 mills per KWh
The Systems Benefit Charge (SBC) is about 3.2 mills per KWh
Assume an average customer uses 500 KWh per month
Monthly SBC charge = 500 KWh * $0.0032/KWh = $1.60/month
Monthly Access Northeast charge = 500 KWh * $0.0048/KWh = $2.40 Minimum
Montly NED charge = 500 KWh * $0.0033/KWh = $1.65 Minimum
The maximum charge for the two projects = 500 KWh * $0.0114 = $5.70 per month

Staff should solicit input from the utilities on how much energy efficiency and weatherization could be accomplished if we added a minimum of $4.05 to the SBC charge on average bills instead of building pipelines.

Weatherization and energy efficiency return immediate value to ratepayers, is the "least cost" option for addressing high winter fuel costs, and reduces our carbon emissions with every MWh/BTU conserved.

The Governor, the RSAs and the experts all assert that energy efficiency should be the first fuel of choice. Since the utilities are also the gatekeepers for energy efficiency programs in New Hampshire, an energy efficiency solution must come through them in order to adequately fund the necessary research.

4) LNG Storage

At least three parties to the discussion (NEPGA, PLAN, and CLF) in IR15-124 maintain that LNG Storage and the issue of addressing a "Deliverability Problem" be considered as better solutions than building pipelines. Staff has dismissed such suggestions as unreliable and expensive.

LNG Storage is a normal and necessary element in a gas distribution system. In fact, generators operating "quick start" depend on them. This is evidenced by the marketing efforts of both Spectra and Kinder Morgan to attract generators with the Spectra "ERS" and Kinder Morgan "Power Serve" programs which allow generators to contract for storage.

On page 15, Staff reports,

"As noted, Access Northeast also includes new LNG storage facilities with a combined usable capacity of 6.0 Bcf, which when combined with liquefaction and vaporization equipment will deliver up to 0.4 Bcf /day of gas on peak winter days."

Then there is this puzzling statement on page 20,

"Under the with Access Northeast scenario, ICF assumes the project will add 0.6 Bcf/day of incremental capacity comprising 0.5 Bcf/day of new pipeline capacity and 0.1 Bcf/day of LNG storage capacity.36 The incremental capacity reduces January gas prices by about $3/MMBtu on average, which together with even smaller average price reductions in other months translates to an annual average wholesale energy…" with the added note,

"36 The assumed incremental LNG capacity is less than 0.4 Bcf/day because the stored LNG must be managed judiciously given that abnormal weather conditions can occur at any time during the coldest winter months. "

If the LNG storage facility has a capacity of 6 Bcf, it would take 15 days to fill it at .4 bcf/day. After the facility is filled, that .4 bcf/day should be released to the system. And, even if we reduce the allowed output from LNG Storage to .1 bcf/day, the total impact once the storage facility is full is to provide the full .9 bcf/day plus .1 bcf/day from storage when needed.

Excluding the .4 bcf/day used to serve LNG Storage from the total pipeline capacity feeding New England is illogical. A total of .9 bcf/day is being moved into the system; putting some of it into storage does not make it disappear.

If it is the case that ICF assumed only .6 bcf/day as the contribution from the Access Northeast pipeline proposal, then the study should be considered flawed and the models relatively useless.

5.) Fuel Diversity will suffer

Vermont Yankee, Brayton Point, and now Pilgrim Nuclear Power plants should all be considered casualties of a purportedly "least cost" strategy that will have negative impacts on consumer price protections and meeting carbon goals.

New England generates approximately 30% of its electricity with nuclear power. Nuclear power plants emit no carbon. The current rating from the EPA for NH is 918 pounds of CO2/ MWh. The goal by 2030, according to the EPAs Clean Power Plan, is 771 pounds of CO2/MWh. Perhaps, not so coincidentally, that is also the emission rate for the newest combined cycle natural gas plant design. Is the plan to convert every power generation source to natural gas by 2030? Please explain to the people what the strategy is here. Recent actions by the PUC, ISO-NE and state leadership seem to be in direct conflict with the goals of the NH 10 Year State Energy Strategy.

Replacing nuclear power plants and small hydro with natural gas fired plants will actually INCREASE our CO2 load by 771 pounds of CO2 for every MW replaced.

In my original comments, I noted that a lack of fuel diversity caused the spikes in winter prices. This remains true. As I mentioned, the evidence exists with Eversource actually having a profitable season because they had hydro and were able to burn coal and oil in their own plants. Eversource was not locked into contracts with independent generators for their default customers as the other utilities were.

And while fuel diversity clearly physically exists, only Eversource was able to take advantage of it during the winter of 2013-2014. Why was that?

There are clearly times when prices for LNG, oil, coal, wind and hydro are lower per MWh than natural gas. Why were alternate generators not ready to be dispatched when prices for natural gas reached levels that made them competitive? In testimony for IR 14-338, Briar Hydro complained about not being able to sell into the local grid during the pricing crisis in 2013-2014. The PUC refused to consider their complaint.

I cannot even pretend to understand the mechanisms of Forward Capacity Markets, the contracts and the auctions. I suspect only a few people do. The experts from NEPGA are among those people and they have advised against this reckless course of action regarding building pipelines at ratepayer expense. They have recommended the PUC to wait until ISO-NE's Pay For Performance rules kick in before saddling ratepayers with a tariff for pipelines.

Fossil fuels are prone to volatile pricing. New emphasis on the harmful climate effects of methane emissions in the production and transportation of natural gas will likely lead to higher prices at the wellhead for recovery equipment. The fossil fuel industry is in a slide and it's not coming back. Entire nations and many states are beginning to ban fracking. Given the global push to leave 80% of fossil fuels in the ground, isn't the PUC endorsing a welfare package for the fossil fuel industry that will leave New England ratepayers hostage to a dying industry for the next twenty years?

The latest EIA report shows that production at the Marcellus Shale is in decline because of fewer rigs being deployed. Is the PUC willing to bet that the trend will reverse before prices begin to climb? http://www.eia.gov/petroleum/drilling/pdf/marcellus.pdf

6. Regulatory Capture/Summary

One of my greatest concerns is that our state has taken the position that it makes sense to replace fossil fuel oil heating systems with fossil fuel natural gas systems. We not only encourage it in many energy strategy chapters for Master Plans across the state, we subsidize it with money intended to fight greenhouse gases in our atmosphere.

This needs to stop.

Since the bulk of the pipeline commitments will go to LDCs to support market growth, we will shortly find ourselves running out of capacity for electricity generation again. Only today I learned of PUC docket DG 15-442 wherein Liberty Utilities asks for franchises in several Cheshire County towns. While I suspect that this is merely a marketing ploy to try to garner support for the NED pipeline in those affected communities, I sincerely hope that Liberty will be required to thoroughly explain the investment required by homeowner to make such conversions.

The emphasis for the PUC should be on supporting the LDCs in reducing heating loads through weatherization programs so that they can direct the saved quantities to new customers.

As I explained in section 2 of this response, it is unclear how much of the proposed 2.1 bcf/day of additional pipeline capacity will benefit electric generators. So far, these projects are clearly of great benefit to some of the LDCs both in terms of growing their market at electric ratepayer expense and return on the investments they are making in the pipeline projects. The pipeline companies, of course, have nothing to risk with a captive customer base of ratepayers underwriting their investment and providing a steady revenue stream for the next twenty years.

Considering how the scrubber on the Merrimack coal plant went from $250 Million to $500 Million, the costs to build these pipelines are probably underestimated. Based on the numbers provided by the PUC Staff Report, I explain in section 3 that at approximately $5.00/month on the average electric bill, ratepayers will be on the hook for about $1200 each over 20 years.

In section 2 I also explain that the intended customers for these pipeline projects are resistant to the very idea of this level of market interference and will not commit to purchasing gas through the EDCs.

Unfortunately, I have little hope that anything I say will change the outcome of the “pipeline story” in New England. The Office of Consumer Advocate litigator, Attorney Susan W. Chamberlin, will be gone as of November 5th. Even though the Residential Ratepayers Advisory Board voted not to reappoint OCA Chamberlin on July 27th, ratepayers only found out about it at the end of September. Her reputation is being attacked as “not understanding energy issues,” which is also designed to reinforce the notion that she is wrong in opposing the pipeline projects being funded at ratepayer expense. This is a huge blow to ratepayer interests. I feel it says everything that needs to be said about what is going on in New Hampshire.

The amounts of money spent on lawyers, advertising and lobbying by the energy companies in this state are stark in comparison with a state like Vermont. Front groups for the energy industry, masquerading as “consumer” or “ratepayer” representatives don’t even have to hide the fact that their leadership and funding come from companies like Kinder Morgan and their law firms. How can anyone come to any other conclusion than New England, and especially New Hampshire, is in a state of Regulatory Capture?

Upton Sinclair, author of “The Jungle” and “Oil!” is famously quoted,
"It is difficult to get a man to understand something, when his salary depends upon his not understanding it!"

My final recommendation is that PUC Staff request an interview with the New Hampshire Center for Public Policy Studies. Kinder Morgan originally contracted with them for a “benefit” study. That contract was terminated in April because the parties couldn’t come to an understanding. The fact that the PUC is relying so heavily on the ICF studies is of great concern, since ICF did not adequately take into account reductions in demand from energy efficiency nor the actual quantities of gas that will be added to the system, as noted in section 4 of this response.

Participating in this docket has been a wonderful learning experience for me as an engineer and as a consumer. Thank you for your consideration of my comments.

Sincerely,

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